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WHAT IS CLAIMED IS:

1.   An interface for connecting networks, comprising:
an interworking function provided between a wireless local area network
5   (WLAN) and a Public Mobile Land Network (PLMN) to provide communication
interactions between the PLMN and the WLAN;
the interworking function further comprising a dual-protocol stack which
interfaces the WLAN protocols and PLMN protocols to provide seamless
communications between the WLAN and the PLMN such that an increase in available
10   service bandwidth provided for users of the PLMN is maintained.

2.   The interface as recited in claim 1, wherein the interworking function is present
within the WLAN.

15 3.   The interface as recited in claim 1, wherein the PLMN includes one of a
Universal Mobile Telecommunications System (UMTS) or a General Packet Radio
Service (GPRS) system.

4.   The interface as recited in claim 1, wherein the interworking function
20   communicates between the WLAN and the PLMN through a Gn interface.

5.   The interface as recited in claim 1, wherein the seamless communications
include protocol compatibility between the WLAN and the PLMN.

25 6.   The interface as recited in claim 1, wherein the interworking function functions
as a logical Serving General Packet Radio Service (GPRS) support node (SGSN).

7.   The interface as recited in claim 6, wherein the interworking function is viewed
by the PLMN as a logical SGSN within its own network.

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8.   The interface as recited in claim 6, wherein the interworking function is viewed
as a node within the WLAN by the WLAN when receiving information from the PLMN.

9.   The interface as recited in claim 1, wherein the interworking function is

coupled to a Gateway General Packet Radio Service (GPRS) support node (GGSN) via a GTP (gateway tunneling protocol) tunnel.

10.   The interface as recited in claim 1, wherein the protocol stack includes a user plane stack.

11.   The interface as recited in claim 1, wherein the protocol stack includes a control plane stack.

12.   The interface as recited in claim 1, wherein the PLMN includes SM/GMM (session management (SM)/GPRS mobility management (GMM)) procedures which are reused in the WLAN due to the use of an adaptation layer in a mobile dual-protocol stack and in the IWF to WLAN interface to mimic the functionality of an RRC (Radio Resource Control) protocol sublayer.

13.   The interface as recited in claim 1, wherein the WLAN works with any Serving General Packet Radio Service (GPRS) or code division multiple access (CDMA) system.

14.   A method for interfacing two wireless networks, comprising the steps of:
           connecting a wireless local area network (WLAN) to a Universal Mode Telecommunications System (UMTS) network through an intra-PLMN (Public Mobile Land Network) interface; and
           interfacing the WLAN to the UMTS network by providing interfaces towards the UMTS and the WLAN using an interworking function such that communications received from the WLAN appear to be from a different Serving General Packet Radio Service (GPRS) support node (SGSN) and communications sent to the WLAN appear to be from within the WLAN.

15.   The method as recited in claim 14, wherein the interworking function communicates with a Serving General Packet Radio Service (GPRS) support node (SGSN) of the UMTS network through a Gn interface.

16.   The method as recited in claim 14, wherein the interworking function creates

seamless interactions between the UMTS network and WLAN by ensuring protocol compatibility between the WLAN and the UMTS network.

17.   The method as recited in claim 14, wherein the interworking function functions as a logical Serving General Packet Radio Service (GPRS) support node (SGSN).

18.   The method as recited in claim 14, further comprising the step of viewing the interworking function as a logical SGSN from a same PLMN.